

SOUTHERN PINE BEETLE POSTSUPPRESSION EVALUATION  
FOR NATIONAL FORESTS IN MISSISSIPPI

by

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INTRODUCTION

Projects to control the southern pine beetle (SPB), *Dendroctonus frontalis* Zimm., were conducted on the Holly Springs, Bienville, and Tombigbee NF's during FY 81. This report summarizes the pertinent information on the suppression projects. Data for this evaluation have been provided by the Southern Pine Beetle Information System (SPBIS).

HOLLY SPRINGS NF

Targets

Targets designated were 1,037 MBF of timber to be salvaged and 2,088 MBF of timber to be protected (Connor and Nettleton 1980).

Results and Discussion

Volume salvaged--

SPB project control salvage was 22 MBF of sawtimber and 8 CCF (6 MBF) of pulpwood totaling 28 MBF of timber removed. This achieved only 3% of the 1,037 MBF target. However, 15 additional SPB spots were treated by a combination of the cut-and-leave and chemical control techniques. A total of 146 trees were felled and sprayed.

Volume protected--

The volume protected was 9 MBF of sawtimber and 30 CCF (23 MBF) of pulpwood totaling 31 MBF. The targeted goal was 2,088 MBF.

Presuppression flights--

There were 12 presuppression flights made covering an estimated 1,498,548 acres.

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SPB activity decreased substantially on the Holly Springs NF during FY 81. This decrease was much greater than Forest Pest Management (FPM) predicted. Only 19 active SPB were treated during the entire year. Fifteen of these spots were treated by a combination of the cut-and-leave and chemical control techniques and 4 spots were controlled by salvage. Several spots were located and not treated because they were inactive or less than 5 trees.

Since early detection of new infestations is the first step in controlling the SPB and reducing timber losses, it is essential that district foresters conduct routine aerial surveys during the spring and summer months. Personnel on the Holly Springs NF made at least one presuppression flight per month during this critical period and did a good job of following the guidelines established in Agric. Handbook No. 560.

Project efficiency (volume salvaged/targeted volume to be salvaged) was low primarily due to the absence of significant SPB activity. The targets were established with the assumption that the number of SPB infestations were going to remain static or decline slightly. However, by the spring of 1981 the SPB population collapsed throughout the State of Mississippi (Mississippi Forestry Commission 1981). Another contributing factor was that volume figures for the spots treated by cut-and-leave were not recorded and, therefore, could not be figured into volume salvaged or protected.

The project effectiveness was very good. The district personnel conducted an aggressive control program and treated all large spots rapidly and effectively, as no breakouts occurred. During the winter months 12 inaccessible spots were treated by cut-and-leave and chemical control, thereby reducing the overwintering populations and contributing to the decline of the number of infestations in the spring and early summer.

#### BIENVILLE NF

##### Targets

Targets designated were 700 MBF of timber to be salvaged and 665 MBF of timber to be protected (Connor and Nettleton 1980).

##### Results and Discussion

###### Volume salvaged--

The Bienville RD salvaged 10 MBF of sawtimber and 23 CCF (18 MBF) of pulpwood. This totaled 28 MBF of timber compared to a target of 700 MBF.

###### Volume protected--

There were 32 MBF of timber protected [9 MBF sawtimber and 30 CCF (23 MBF) of pulpwood] compared to a target of 665 MBF.

#### Presuppression flights--

Ten presuppression flights were flown, covering an estimated 850,000 acres.

SPB populations decreased more dramatically than FPM predicted on the Bienville RD during FY 81. Only 2 active SPB spots needed to be controlled. Both of these spots were salvaged and there were no breakouts. Several small SPB spots caused by lightning strikes were detected, but went inactive before control was necessary. District personnel conducted at least one presuppression flight during each summer month, thus aerial surveillance was adequate.

Once again, the major reason that the project efficiency was low was due to the decline of SPB populations in the area. However, project effectiveness was 100% as all the infestations that occurred were rapidly detected and controlled.

#### TOMBIGBEE NF

##### Targets

Targets designated were 918 MBF of timber to be salvaged and 899 MBF of timber to be protected (Connor and Nettleton 1980).

##### Results and Discussion

##### Volume salvaged--

The volume salvaged during the SPB suppression project achieved 18% of the designated target. There were 15 MBF of sawtimber and 200 CCF (154 MBF) of pulpwood removed totaling 169 MBF.

##### Volume protected--

The total timber volume protected equalled 312 MBF [120 MBF sawtimber and 249 CCF (192 MBF) pulpwood]. This achieved 35% of the targeted volume of 899 MBF.

##### Presuppression flights--

Nine presuppression flights were flown during FY 81, covering an estimated 770,400 acres.

SPB activity decreased more than FPM predicted on the Tombigbee during FY 81. Only 7 active SPB spots were treated during the entire year. All infestations were controlled by salvage and there were no breakouts. Several spots were located and not treated because they were either inactive or less than 5 trees. District personnel conducted at least one presuppression flight a month during the summer, so aerial surveillance was adequate.

The major reason that the target volumes were not achieved, and the project efficiency was low, was the absence of significant SPB activity. However, all SPB infestations that required control were treated promptly and effectively. The majority of the spots occurred between October and December. After that period only small SPB infestations and trees killed by Ips bark beetles were detected.

#### REFERENCES

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